

APPLICANTS: Harth Yoram  
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A1 -- FIGS. 10A-10F, are schematic illustrations of another embodiment of the present invention light source apparatus, wherein the illumination head is structured of an integrated dual illumination source; --

Please replace the paragraph beginning at page 12, line 28 with the following paragraph.

A2 -- Figure 6A is a schematic cross section illustration of one of a set of three possible preferred embodiments of the present invention lighting head unit 13 of the apparatus described in figure 1, the first possible embodiment is referred to herein below as system 50. Light source head embodiment of system 50 consists of a housing 51 that supports an arc lamp, or a line beam shape laser light source (not shown) that emits violet/blue light with a peak at 405-440nm. The light source is fixed in the first focal point 54 of an elliptical cross section shape reflector 53. The energy emitted out of the preferred spectral band reflected by the elliptical shaped reflector and is imaged as a line source at its second focal point 55. From the secondary focal point the beam is diverging at a small angle and creates an oval shaped illumination area 81 of typical size 20X10cm<sup>2</sup>. at a convenient treatment distance of 30-40 cm. from the lamp housing exit aperture. The non violet spectral part of the light source emission is rejected and filtered out by filter unit 56 and the lamp housing is sealed by tempered glass window 57 possibly coated with a heat mirror layer for the protection of the patient against heat and explosion. The required narrow spectral emission band of violet/blue light source is radiated by the present invention dedicated arc lamp due to a special gas mixture within the lamp, or by a violet/blue light emitting semiconductor diode junction array. The above light sources in a single source type embodiment, or in a combination of two or three type of different spectral emission bands light sources alternative embodiment, allows optimal violet/blue light radiation with, or without, additional narrow spectral band lines in the red or green parts of the spectrum.--

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Please replace the paragraph beginning at page 13, line 18 with the following paragraph.

A3  
-- Figure 6B is a schematic cross section illustration of a second possible preferred embodiment of the present invention lighting head unit 13 of the apparatus described in figure 1, the second possible embodiment is referred to herein below as system 60. Light source head embodiment of system 60 consists of a housing 61 that supports an arc lamp, or a line beam shape laser light source (not shown) that emits violet/blue light with a peak at 405-440nm. The light source is fixed in the first focal point 64 of an elliptical cross section shape reflector 63. The energy emitted out of the preferred spectral band reflected by the elliptical shaped reflector and is imaged as a line source at its second focal point 65. In the secondary focal point 65 the beam enters a slit or an oval shape fiber bundle aperture, matching the size and shape of the imaged light line. At the exit circular aperture 67 of this fiber bundle the emerging light is diverging at a typical 40 degrees angle and creates a circular shaped illumination area while its size and consequently the illumination power density can be controlled by changing the distance from the exit fiber end 67 to the patient treated skin area. The UV on violet spectral part of the light source emission is rejected and filtered out by filter unit 66 and the lamp housing is sealed by a cover window 92. The above light sources in a single source type embodiment, or in a combination of two or three type of different spectral emission bands light sources alternative embodiment, allows optimal violet/blue light radiation with, or without additional narrow spectral band lines in the red or green parts of the spectrum.--

Please replace the paragraph beginning at page 14, line 7 with the following paragraph.

A4  
-- Figure 6C is a schematic cross section illustration of a third possible preferred embodiment of the present invention lighting head unit 13 of the apparatus described in figure 1, the third possible embodiment is referred to herein below as system 70. Light source head

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A4  
embodiment of system 70 consists of a housing 71 that supports an arc lamp, or a line beam shape laser light source (not shown) that emits violet/blue light with a peak at 405-440nm. The light source is fixed in the first focal point 74 of an elliptical cross section shape reflector 73. The energy emitted out of the preferred spectral band reflected by the elliptical shaped reflector and is imaged as a line source at its second focal point 75. After passing through in the secondary focal point 75 the beam is entering a set of two cylindrical lenses 76 and, which are orthogonal oriented with respect to their linear axis. At the exit of this lens system aperture a close to a circular light illumination area is created of typical size 20X20cm<sup>2</sup> at a convenient treatment distance of 30-40 cm. from the lamp housing exit aperture. The UV on violet spectral part of the light source emission is rejected and filtered out by filter unit 79 and the lamp housing is sealed by a cover window 80. The above light sources in a single source type embodiment, or in a combination of two or three type of different spectral emission bands light sources alternative embodiment, allows optimal violet/blue light radiation with, or without additional narrow spectral band lines in the red or green parts of the spectrum.--

Please replace the paragraph beginning at page 15, line 24 with the following paragraph.

A5  
-- Figure 8B is a close look of control panel 86 in figure 8A. 89 is an electronic timing mechanism for controlling the treatment time. Counter 90 is a time-laps numerical indicator, for counting the accumulated operational hours of the illumination head 81. Switch 95 and indication lamps 92 and 96 enable switching and selecting the intensity of illumination between two discrete pre-selected energy levels. Switch 94 and the attached status indication lamp 93 is the system main power switch.--

Please replace the paragraph beginning at page 16, line 1 with the following paragraph.

A6  
-- Figures 9A and 9B are two schematic views illustrations of another embodiment the

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A6 present invention violet/blue light source apparatus 200, wherein in figure 9A the illumination source is structured of a dual illumination head module 201. The dual illumination head module 201 is operated by an integrated power supply and electronic control unit 206 and is supported by an adjustable height supporting mechanism 203. The head 210 height positioning, related to the treated area defined by the two illumination collimated light beams 230, is done by sliding up or down a supporting pole with an integrated piston unit which is a part of the support mechanism 203 and then tightening the lever 204 at the requested height. Cable harness 221 connects the illumination heads 201 to the power supply and electronic control unit 206. Control panel 205 enables the operation and control of the operational parameters of the power supply and electronic control unit 206. Unit 206 is supported by a set of four maneuvering wheels 208, having an integrated stop and lock mechanism. The two illumination heads can be slightly tilted by the operator around pivot axis 202, in order to adjust the positioning and consequentially the illumination energy distribution of the two illumination collimated light beams 230, to be equally and evenly distributed on the two face sides of the treated patient head 210.--

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Please replace the paragraph beginning at page 18, line 4 with the following paragraph.

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A7 -- Figure 10F is a look of illumination head 301 including the ventilation air input duct aperture 354 and illumination output-window aperture 352. Figure 10E is a close look of the illumination output-window aperture 352 of the illumination head 301. Illumination output-window aperture 352 includes a halogen or tungsten filament lamp 350, geared for the illumination of the patient treated area, and an illumination unit glass protected output aperture window 351.--

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